ART. XXV.—*Beiträge zur Praktischen Augenheilkunde.* Von Dr. J. HIRSCHBERG, Docent an der Universität zu Berlin. Hefte I., II., III. Berlin: Hermann Peters, 1876. Leipzig: Veit & Co., 1877 and 1878.

Contributions to Practical Ophthalmology. By Dr. J. HIRSCHBERG, Lecturer in the University of Berlin. Parts I., II., and III.

IN 1874 Dr. Hirschberg published a small monograph entitled "Clinical Observations," and in 1876 the first part of the present work, "Contributions to Practical Ophthalmology." There are six chapters in this first part, in which are considered certain diseases of the conjunctiva, cornea and sclera, uveal tract, optic nerve and retina, lens, nerves, and muscles, from a clinical and therapeutical standpoint. The observations are based on nearly 10,000 cases occurring during the years 1873, 1874, and 1875. The first section treats of blenorrhœa neonatorum and diphtheritic conjunctivitis, and Hirschberg considers that in the vast majority of cases the cause is infection during parturition by means of some secretion in the genital passages of the mother. He uses the term "ophthalmia neonatorum" as descriptive, and includes under it simple conjunctival catarrh, as well as exanthematous conjunctivitis from congenital syphilis, and some other affections. He cites some cases of kerato-malakia, or simple suppuration of the cornea, without any conjunctival affection, occurring in young children with general marasmus, and points out that this is a process to be carefully differentiated from corneal suppuration occurring with blenorrhœa. His treatment of blenorrhœa agrees with that of most authors—iced compresses and cleanliness for the slight cases, cauterizations with silver nitrate for the severer forms, varying in strength from a solution of 1½ per cent. to the use of the lapis mitigatus. The cases of diphtheritic conjunctivitis were almost all slight, and most of them recovered completely by the simple use of iced applications and bran poultices. The section on abscess of the cornea and keratocele contains nothing new of importance.

In speaking of cyclitis deformans and its treatment, Hirschberg emphasizes very justly some rational ideas, which are the outgrowth of experience. He regards the only proper treatment to be the enucleation of the inflamed eye as a preventive of sympathetic inflammation, as all intra-ocular operations on eyes blinded by inflammation of their inner coats involve very great danger of sympathetic ophthalmia. This the reviewer regards as sound doctrine, for such eyes must certainly be classified as among the "noli me tangere" cases of ophthalmic surgery.

On the subject of glaucoma, Hirschberg regards the relative frequency of the hemorrhagic form as very great in his own experience. These cases are of the most malignant type.

Under the head of diseases of the optic nerve and retina, Hirschberg gives the histories of two interesting cases of degeneration of the optic nerve from intra-uterine deformity of the skull. The skulls were very high and narrow, as if compressed laterally, and the interpalpebral slit resembled the Mongolian conformation.

The author regards diffuse syphilitic retinitis as very amenable to treatment, if it is carried on for a length of time in a darkened room, and even in the worst cases, a complete restoration of vision is possible. He cites six cases with successful result; and a study of them shows several points of interest. The subjective prodromal signs may precede by a long period the clouding of the retina and disturbance of vision. Another case showed that rapid improvement may take place after two years of constantly increasing amblyopia.

The last section in this first part is a short, practical article upon the subject of squint, with a report of five cases, and tables showing the result of careful examinations before and after the operation, of the muscular dynamics of each eye, with a view to the more exact dosing of the operation. The absolute necessity of a quantitative analysis of the squint and of the squint-operation is often not sufficiently appreciated.

The second part contains the seventh annual report of Hirschberg's clinic, as well as papers by Hirschberg on "The Use of the Lance-headed Knife in the Extraction of Cataract," on "The Measurement of Refraction and a new Optometer;" a short paper by Thel on "Examination of the Upright Retinal Image;" articles on "Enucleation," and "Weber's Method of Extraction," by Pufahl, and "Clinical Notes," by Rother.

Hirschberg speaks favourably of extraction with the lance-knife, only he prefers a flat blade instead of Weber's concave one, and the knife must be a broad one. The advantages he claims for the method are rapid closure of the wound and consequent early restoration of the anterior chamber.

Hirschberg's optometer consists of a combination of two convex lenses of short, but different focal length, which produce an inverted image of an object. Hence in testing a patient's refraction, the test-types must be placed upside down. In its practical application, if it is desired to produce a sharp image of the types in an emmetropic eye, the distance between the two convex lenses must be equal to the sum of the focal lengths of the two lenses. If the eye examined be myopic, the distance between ocular and objective must be less than the sum of their focal lengths, and greater than the focal length of the first. If the eye examined be hypermetropic, the distance between the ocular and objective must be greater than the sum of their focal lengths. These changes are made by altering the length of the tube containing the lenses by means of a screw. The instrument may be used for one eye, or two. Another advantage claimed for it by Hirschberg is, that it admits of a convenient and sure control of the results of examination, when based on a patient's statements. If the optometer is reversed so that objective and ocular change roles, the constants are changed, and have a different value, so that a very different distance between the lenses is necessary for a given ametropic eye. Hirschberg also gives a table containing all the necessary calculations for making and corroborating the examinations. Not to be behind other ophthalmologists, the world over, Hirschberg has also constructed an ophthalmoscope of his own, which only differs from several of the modern examples, in having fewer glasses, and these twice the diameter of those in ordinary use; modifications which have no practical value.

Thel's paper on "Examination of the Upright Retinal Image" consists of a mathematical determination of the proper correcting glass for the upright image, with the necessary tables and directions how to use them; and of a discussion upon the enlargement of the upright image.

Pufahl's article on "Enucleation of the Eye" is short, and contains nothing of special interest.

This second part concludes with the statistics of treatment and operations during the year, and short clinical notes of some interesting cases.

The third part contains the eighth annual report of Hirschberg's clinic, a statistical report of all the cases treated at the clinic from 1871 to 1877, and several interesting papers by Hirschberg.

In a paper on "Hemianopsia," Hirschberg reviews the history of the discussion of the very important subject, the course of the optic nerve fibres in the chiasm of man, and gives an exhaustive epitome of the views held by different authors from Galen to the present day. He calls attention to the extreme importance of autopsies in cases of typical hemianopsia, with a view to the elucidation of the much-discussed question: "Is the decussation in the optic chiasm partial or complete?" He concludes by laying down as necessary postulates of the theory of semi-decussation, which he upholds: first, that homonymous hemianopsia occurs most frequently, is sharply defined, and may be stationary, that is it may not involve the intact halves of the visual fields; secondly, that crossed temporal hemianopsia is relatively rarer, not so sharply defined, and is progressive; thirdly, that nasal hemianopsia never occurs.

In a paper on the "Changes of the Fundus Oculi in General Anæmia" Hirschberg distinguishes in the fundus three varieties of pathological appearances.

1st. The optic papilla of both eyes becomes pale, the retinal vessels remaining unchanged, and later becomes almost as white as in extra-ocular atrophy, but without the sharply-defined limitation of the disk. The vision is unchanged unless disturbed by exudation or hemorrhages into the retina. This change occurs both in pernicious and curable anæmia.

2d. In chronic anæmia, whether pernicious or secondary, following loss of blood, the optic papilla becomes cloudy-white, the vessels are narrowed, especially the arteries, and cannot be followed distinctly for any great distance beyond the margin of the disk. There exists a delicate optic neuritis without much disturbance of vision. Hemorrhages and exudation may occur as well here as in the first variety.

3d. A few days after the loss of blood there may occur a pronounced neuro-retinitis, without any premonition, with great exudation and numerous hemorrhages, and disturbance of vision, which may lead in a few days to absolute amaurosis.

He gives the histories of a number of cases, which illustrate the three forms of change.

The third paper, by Hirschberg, is on the "Elementary Description of Gauss's Dioptrics of Spherical Surfaces," and is purely mathematical.

The last paper is by Pufahl, and consists of rather voluminous clinical notes of interesting cases, among which we may note a case of granuloma iridis, one of choroidal tubercle, several of congenital changes in the optic nerve, one of intra-ocular cysticercus, and two of diabetic cataract.

These brief publications contain many points of interest to ophthalmologists, and are to be continued periodically. C. S. B.

ART. XXVI.—*Ninth Annual Report of the State Board of Health of Massachusetts.* 8vo. pp. xl., 529. Boston, 1878.

THIS Report comes loaded as usual with valuable and interesting matter. From the general report which occupies the earlier pages, as well as from passages in several articles treating of the sanitary condition of special localities, we learn that saturation of the soil with various forms of filth has become a most important and active source of injury and danger to the public health in many of the towns. The State is one of the most densely populated, and oldest in the Union. The natural tendency has been for a progressively increasing contamination of its soil, and consequently of its air, and its waters from wells or rivers. In some districts where the underlying rock is but thinly covered with soil, and sometimes so disposed as to retain sewage, or to conduct it into wells or other sources of water-supply, this cumulative pollution is pretty clearly shown to exert a decided and baneful effect upon the public health. Contamination of the rivers,